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### REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on January 4, 2006, and the references cited therewith. Claims 42, 48, 91, 99, 106, 111, 114, 121, 126, 131, and 136 are amended, and claims 1-41 and 53-90 were previously canceled; as a result, claims 42-52 and 91-145 are now pending in this application.

Claims 42-45, 48-52, 91-94, 98-101, 105-108, 110, 111, 113-123, 126, 127, 129, 131-134, 136, and 140-143 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 5,819,028 to Manghirmalani et al. (Manghirmalani). Claims 46, 47, 95-97, 102-104, 109, 112, 124, 125, 130, 135, 144, 145 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manghirmanlani in view of U.S. Patent No. 6,064,984 to Ferguson et al. (Ferguson). Claims 138 and 139 are rejected under 35 USC § 103(a) as being unpatentable over Manghirmalani in view of U.S. Patent No. 6,012, 042 to Black, et al. (Black). Claim 137 is rejected under 35 USC § 103(a) as being unpatentable over Manghirmalani in view of U.S. Patent No. 6,055,514 to Wren. Claim 128 was rejected under 35 USC § 103(a) as being unpatentable over Manghirmalani in view of U.S. Patent No. 6,539,361 to Richards.

Applicant acknowledges with gratitude the courtesy extended by Examiner Ke in conducting a telephonic Examiner Interview with Applicant's representative Margo Livesay on May 10, 2006. During the course of the discussion, the features of independent claim 42 were discussed, as were FIG. 2 and the Manghirmalani reference. More particularly, the Office Action's interpretation of "display of a graphical arrangement of the selected set of data parameters relative to one another" as recited, for example, by claim 42, was discussed. Examiner Ke noted his interpretation that FIG. 2 of the present application illustrates a display of the "actual parameters" that have been selected, in contrast to the display of the Manghirmalani reference. No agreement was reached.

Regarding the rejections of independent claims 42, 91, 99, 106, 111, 121, 126, 131, 136, and 141 under 35 U.S.C. 102(b) as being anticipated by Manghirmalani, Applicant respectfully submits that Manghirmalani does not disclose or suggest all of the features recited in the above-listed independent claims.

In the interest of advancing prosecution, at least independent claim 42 has been amended to recite “a data canvas on which a selected set of one or more of said set of data parameters can be displayed and relatively positioned arbitrarily by a user to generate the data picture wherein the data picture includes a display of a graphical relative positioning of the selected set of data parameters relative to one another, the graphical relative positioning being configured by the user within the data canvas.” Applicant respectfully submits that the dial meters 1301 (and/or 1302 and/or 1303) of FIG. 13 of Manghirmalani have nothing to do with any type of “data picture wherein the data picture includes a display of a graphical relative positioning of the selected set of data parameters relative to one another, the graphical relative positioning being configured by the user within the data canvas” as recited by amended independent claim 42.

Moreover, dependent claim 43, which depends from claim 42, recites “wherein said selected set of data parameters can be selected and physically moved by such user to a gradient on said data canvas by physically manipulating an electronic pointing device.” The Office Action (p. 3) contends that this feature is taught by Manghirmalani at col. 12: 16-45. However, the cited portion of Manghirmalani merely discusses a window of FIG. 12 of Manghirmalani that is used to modify settings for a particular meter type. As best understood, the Office Action apparently equates the “data parameters” recited by claims 42 and 43 with the formula shown in the scroll box 1203 and the MIB Objects shown in the scroll box 1205. However, neither the formula in the scroll box 1203 nor the MIB Objects shown in the scroll box 1205 teach “the graphical relative positioning being configured by the user within the data canvas” as recited by amended independent claim 42.

None of Ferguson, Black, Wren, or Richards, neither alone nor in any reasonable combination, cure the deficiencies of Manghirmalani discussed above. Therefore, the rejection of claims 42 and 43 should be withdrawn.

For reasons similar to those discussed previously with regard to amended independent claim 42, the rejections of independent claims 91, 99, 106, 111, 121, 126, 131, 136, and 141 should also be withdrawn.

Dependent claims 44-52, 92-98, 100-105, 107-110, 112-120, 122-125, 127-130, 132-135, 137-140, and 142-145 are allowable for at least the same reasons as their respective independent claims, and are separately patentable on their own merits.

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (703-286-5735) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-3521.

Respectfully submitted,

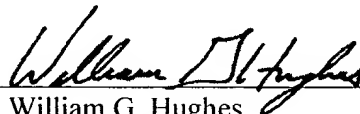
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Date June 5, 2006

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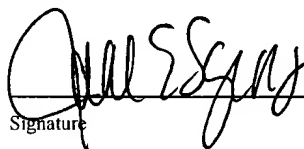
William G. Hughes

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# Can you trust mutual fund rankings?

Markese, John

Consumers' Research Magazine, Oct 1993; 76, 10; Research Library  
pg. 20

## Can You Trust Mutual Fund Rankings?

John Markese

**J**ust try to get through a week without catching a glimpse of some publication's ranking of mutual funds. Not only financial magazines but news magazines and others are in on the act.

Not surprisingly, different ranking techniques make for different rankings and investor bewilderment. Adding to the confusion, some financial sources producing mutual fund rankings explain their techniques in detail while others are vague, or silent, on the subject.

The basis for all rankings are return and risk. Take the easier concept of the two, return: Just the choice of time periods for calculating returns can influence the performance rankings significantly. When it comes to risk, there are universal measures and one-of-a-kind measures offered by mutual fund ranking services, further confusing an already conceptually difficult component of any investment decision.

Looking at the range of techniques and measures by examining a sample of approaches and comparing them to basic risk and return measures should at least provide a foundation for understanding and deciphering the next mutual fund ranking that grabs your attention.

### Differences in Returns

Determining a mutual fund's return is not a complicated mathematical task. What, then, accounts for differences among returns from the various rankings services? There are a number of factors. They included:

- **The Time Period Covered.** The calendar year—January 1 through December 31—is the most common unit of time, and multiples and fractions of the calendar year are often reported. Performance as of June 30 is also a time period used by publications going to press in late summer and early fall with a special mutual fund issue.

What happens when performance covering a calendar year is compared to performance as of June 30? The performance difference between these two time periods is actually more than six

months; in fact, there are two six-month periods that are different. For example, compare two five-year return figures: the five years ending June 30, 1992, and the five years ending December 31, 1992. The first five-year figure includes the period June 30, 1987 through December 31, 1987, a period that encompasses the October 1987 market collapse. The second five-year figure includes the period June 30, 1992 through December 31, 1992, which encompasses a portion of the small stock fund rally. A small stock mutual fund could have drastically different performance figures over these two five-year periods. When you encounter different reported results on a fund you are following, look first at the precise time period covered.

Another time period problem arises when ranking services provide returns for up market (bull) and down market (bear) performance periods. First, there is no precise definition of a bull or bear market. Second, some reporting services use multiple up and down market periods; and third, not all funds were in operation during all the up and down market periods. Because there is little consensus, but much emphasis, on this type of evaluation, for risk as well as return, ranking differences are commonplace.

- **What the Return Includes.** Returns are composed of capital gains plus income, and reflect the expenses of running the fund, along with the brokerage costs incurred in buying and selling the securities in the fund portfolio. Fund expenses include investment adviser fees and the administrative costs of the fund. If a fund has an investor-paid 12b-1 charge, which is an annual load levied on fund assets, this is also included in the return figure. Front-end loads, back-end loads, and redemption fees are usually not included in the return figures.

However, some publications—*Money*, for example—include full front-end loads in at least some of their performance statistics. *Money* reports what \$10,000 would have grown to over five years, with any front-end sales charges included. The dilemma is that if front-end loads are included in all returns, short-term performance figures would be severely distorted, obscuring the performance of the fund and the portfolio manager. But loads do directly reduce the return to investors no matter what the time period.

*Mr. Markese is the president of the American Association of Individual Investors (AAII). This article is excerpted from a series in the AAII Journal. Copyright © 1993 AAII.*

• **Reinvestment of Fund Distributions.** Almost all reported returns include the reinvestment of any distributions made by the fund during the period. But *when* the distributions are reinvested does differ among reporting services, and this may make a significant difference in reported performance. *Forbes*, for example, reinvests distributions at the end of the month in which the fund makes its distribution (goes ex-distribution). Almost all funds reinvest, however, at the ex-distribution price on the ex-distribution day, which may not be the end of the month. If the fund price at which distributions are reinvested for mutual fund shareholders is not the same price as the month-end price, then reported returns can vary substantially, particularly when markets move sharply and abruptly.

• **How the Return Performance Is Reported.** There are three common reporting techniques for returns that you are most likely to encounter: dollar returns, annualized returns, and unannualized returns. Dollar returns are difficult to evaluate. Few investors can look at a dollar return, particularly over a long period, and make an informed judgment. (See box to right.) Therefore, the standard in reporting performance, and for good reason, is a percentage return.

## Risk Ratings

Any mutual fund ranking, whether depicted by stars, arrows, letter grades, or tiny bags of money would be incomplete without a risk component. And while just about everyone agrees on what total return is and how to calculate it (although return reporting formats may differ from source to source), there is far from universal agreement on risk.

The table (see page 22) provides a quick survey of risk measures reported for mutual funds. While there is some consistency, there is much diversity. Most worrisome are the instances where no risk measures are offered for evaluating return performance. Including some of the old standby measures, there appear to be two camps of risk definitions: those that define risk by total return variation and those that define it as returns below the Treasury bill rate or some other benchmark.

**Standard Deviation.** Standard deviation\* treats returns above the average and below the average

\* The universal measure of variation in return (or volatility) is standard deviation. Standard deviation measures the deviation of actual returns (usually monthly returns) for a fund from the average of its returns for the period covered. For instance, if the average return for the fund was 10%, and the standard deviation 5%, that means that most of the actual returns for the fund over the time period clustered between 5% and 15%. The greater the standard deviation, the less clustered the returns and the less predictable the return—which means more risk.

## Translating Performance

### Converting a Dollar to a Percentage Return

\$10,000 invested in Acorn would have grown to \$23,521.20 at the end of five years ending December 31, 1992.

Divide the final amount by the initial amount:

$$\$23,521.20 \div \$10,000.00 = 2.352$$

Subtract 1.000 to recognize that you started with an initial investment:

$$2.352 - 1.000 = 1.352$$

Multiply by 100 to convert return from decimal to percentage:

$$1.352 \times 100 = 135.2\%$$

Five-year return = 135.2%

### Annualizing a Multi-Year Return

Over the five-year period, Acorn Fund had a total return of 135.2%

Convert percentage return to decimal form by dividing by 100:

$$135.2\% \div 100 = 1.352$$

Add 1.000 to reflect initial investment:

$$1.352 + 1.000 = 2.352$$

Take the 5th root to determine an annual figure:

$$2.352^{1/5} = 1.186$$

Subtract 1.000 to recognize your initial investment:

$$1.186 - 1.000 = 0.186$$

Multiply by 100 to convert from a decimal to a percentage:

$$0.186 \times 100 = 18.6\%$$

Compound five-year annual return = 18.6%

alike. Most investors are less concerned with returns that are above-average—in fact, they are quite welcome; instead, most investors are concerned with below-average or negative returns. On the other hand, since distributions of returns tend to be generally symmetrical around an average return, looking at the whole distribution for all funds and comparing standard deviation isn't really different from just looking at half the returns—those that are below the average.

Standard deviation is a useful and reliable measure of period-to-period return variation. Whether this should be your focus of risk is another question. This risk measure is most useful if your investment horizon is shorter and capital preservation is more important.

**Benchmark.** This camp centers around fund returns that are below some benchmark, usually funds with similar investment objectives or the Treasury bill rate. The rationale for using Treasury bills is rooted in comparison to an available riskless return benchmark. These bills are liq-

uid, default-free, and, if held to maturity (which is short), they are completely free from return variation.

This risk measure is calculated by dividing the total of all returns below the Treasury bill rate by the number of periods when this occurred. The larger the negative average, the greater the risk and the more variation on the downside.

While this risk measure may have intuitive appeal for investors, some funds that have relatively high standard deviations may have relatively low Treasury bill risk numbers. Why? The averaging of the returns below the Treasury bill rate may wash away some aspects of risk. First, funds with numerous instances of returns below Treasury bills may show the same or less risk than a fund with just a few returns below the Treasury-bill rate. Second, a fund with some severe declines below the Treasury-bill rate may have these extreme returns diluted by frequent but small declines below the Treasury-bill rate, thereby raising the average.

Comparing the risk of one fund to that of

other funds with the same investment objective usually entails comparing the standard deviation of a fund's return to the standard deviation of the average return for all funds in the same investment objective category. Another measure is the magnitude by which a fund falls below the investment objective average, which indicates risk to the investor seeking that particular objective.

Risk is perceived to be performance that is below the average for the objective category. The difficulty with this approach to risk is the categorization of funds by investment objective. Not all funds fit neatly into categories—some funds are categories unto themselves and other funds straddle categories. This approach to risk is appropriate if you view risk as being invested in a mutual fund that fails to meet its investment objective adequately when it is compared to similar funds.

**Not Too Long, Not Too Short.** The time period for published risk measures varies from as long as 10 years to only a few months. Looking at a period

## Risk Assessment by Mutual Fund Data Sources

Source	Return Volatility	Risk Relative to Similar Funds	Return Below a Benchmark	Other	Time Period	Notes on Risk Measures
<i>Barron's</i>	—	—	—	Yes	5 years	Gives only volatility rankings for investment objectives and only for equity funds. Volatility is undefined.
<i>Business Week</i>	—	—	Yes	—	5 years	Risk of loss is directly related to average of returns below Treasury bill rate.
<i>Consumer Reports</i>	—	—	—	Yes	Months ('87 & '89)	Compares performance of funds to S&P 500 in 1987 and 1990 bear markets, and equates better relative performance to lower risk.
<i>Financial World</i>	—	—	—	Yes	1, 3, 5, & 10 years	Volatility of net asset value; composite of average volatility for 1-, 3-, 5- and 10-year periods, depending on fund life.
<i>Forbes</i>	—	—	—	—	—	No risk ranking.
<i>Kiplinger's</i>	Yes	Yes	—	—	3 years	Compares risk to funds with same investment objective.
<i>Money</i>	Yes	—	—	—	5 years	No risk analysis for funds with less than five years of data.
<i>Morningstar</i>	—	Yes	Yes	—	Various Rating Periods	Risk of loss is directly related to average of returns below Treasury bill rate. Reports other risk measures not used in ranking.
<i>Quarterly No-Load Mutual Fund Update (AAII)</i>	Yes	Yes	—	—	3 years	Compares risk to funds with same investment objective.
<i>U.S. News and World Report</i>	Yes	—	—	—	3 years	Grades risk against all funds.
<i>Wall Street Journal Worth</i>	—	—	Yes	Yes	5 years	No risk ranking. Risk of loss is directly related to average of returns below Treasury bill rate. Also reports largest one-quarter loss.

that is too short, when there aren't sufficient examples of different market conditions, may result in a risk measure that relies on an unusual, narrow-market circumstance. A period that is too long may mean that you are gauging the risk of a fund that, for part of the period, was much smaller in assets and had a different investment cycle, perhaps a different portfolio manager or investment objective.

What period is both long and short enough? Three years normally takes a fund through a few market cycles and five years does the same without dredging up ancient and perhaps irrelevant financial history.

Remember, the longer you intend to be invested in any fund, the less important is the volatility of the fund over the short term. Lastly, keep in mind an important paradox—trying to avoid risk in your investments (investing in only T-bills, for instance) will almost certainly increase the risk of failing to meet your long-term, inflation-adjusted goals. (See "What's Wrong With Low Interest Rates," *CR*, August 1993.)

## Ranking Differences

Beyond the possible variation in time periods and risk measures, rankings also require that the funds be compared to some benchmark, and the choices of benchmarks are many. For rankings, mutual funds are often compared to all other funds, or to funds with similar investment objectives, or to some broad market index. In addition, the various components of a ranking—performance and risk measures, for instance—may be weighted, which means that some statistics are assigned more importance than others.

The chart on page 24 summarizes and compares mutual fund ranking techniques for a cross-section of financial sources. As you can see, while there are similarities and common threads, the ranking techniques are sometimes one-of-a-kind. And the descriptions of these techniques given in the publication can be far from clear.

The next column in the chart indicates the benchmark used to rank the funds. For instance, *The Wall Street Journal* ranks the return of a fund against the performance of all other similar funds for the period; in contrast, *Kiplinger's* uses broad fund categories—such as all equity funds—as a benchmark.

Beyond return and (almost always) risk, do rankings include other factors? Usually not, but the most common other factor that may be thrown in is a fund's expense ratio, which is management fees and operating expenses of the fund expressed as a percentage of fund assets.

## Know the System

Here are some points to consider when looking for a source for mutual fund rankings.

- Risk should be an explicit and important part of any ranking. Examining fund performance without risk adjustment is financially dangerous.

- The ranking should emphasize three- to five-year performance data. Shorter periods are less meaningful and longer periods may capture the performance of a fund that, through growth, management change, and changes in investment philosophy and technique, has evolved into essentially a different fund.

- Funds should be ranked against other funds with very similar investment objectives. Not all equity funds or all bond funds are alike.

- Avoid rankings that use more variables and more weightings than you can reasonably understand. If you don't understand a particular ranking system, don't use it.

Don't make any ranking the beginning and end of your mutual fund analysis. Get the prospectus and annual report of top-ranked funds in the same investment objective category that you are interested in and compare the funds subjectively on management, fund expenses, loads, fees, charges, distributions, tax implications, and services.

Even though fund expenses already have reduced performance dollar for dollar, a very high expense ratio is hard to overcome in the long term and may be a useful factor when included separately. *Worth*, while also apparently doing no risk-adjustment, uses fund expenses and eight other variables, portfolio manager tenure for example, to rank funds. The more factors, the more complex the rankings, but not necessarily the more meaningful or understandable the rankings.

In any ranking, not only must a decision be made on what factors to include but also how important those factors should be in the final ranking. Weighting the factors determines their relative importance. Dividing total return by a risk measure, for example (the approach used by *Money*), and ranking the resulting numbers effectively gives both risk and return equal weight, an intuitive norm. Individual investors, however, may differ substantially in their feelings about the relative importance of risk and return. *Consumer Reports* gives return a weight of two-thirds

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and risk one-third in their rankings. The rationale? None is given. *Financial World* assigns a one-sixth weighting to each five-year return, risk, and fund expense and a three-sixths weighting to the one-year return. *Worth* changes weights for short-term, medium-term, and long-term returns to develop fund rankings separately for those time periods.

At least the rankings themselves are easy to understand, you may think. An A is an A, and an F is an F. True, but some As and some Fs have more relative importance. Both *Forbes* and *Kiplinger's* give A to F rankings for bull and bear markets. But *Kiplinger's* gives the top 20%, by

risk-adjusted return, of all funds in a broad category an A for the bull or bear periods, the next 20% get Bs, and so on. *Forbes* uses essentially the same technique, but curves the rankings. A curve means fewer As and Fs and more Bs and Ds, with the largest number of funds for any category getting a C ranking.

Not surprisingly, given the complexities and idiosyncrasies of these rankings, the same fund can be rated very differently by different sources. With all the differences in time periods, risk measures, weighting, benchmarks, and treatment of loads it is perhaps surprising that there is anything close to agreement on rankings. 42

## Ranking Systems At A Glance

Publication	Risk-Adjusted	Ranking Period	Ranking Benchmark	Other Ranking Factors	Special Weighting	Ranking	Notes
<i>Business Week</i>	Yes	5 years	S&P 500	None	None	Arrows (from 3 up to 3 down)	Loads included
<i>Consumer Reports</i>	Yes	5 years	Similar funds	None	$\frac{2}{3}$ return; $\frac{1}{3}$ risk	0 to 100	Loads and redemption fees included
<i>Financial World</i>	Yes	1 and 5 years	Similar funds	None	5-year return, risk, annual expense—equal weightings; 1-year return is equal to the other three combined	A+ to D	Front-end loads included in 5-year returns
<i>Forbes</i>	Not directly*	3 up and down market cycles	Broad categories	None	None	A to F for bull and bear markets	Rankings assigned on a curve—Cs are the most common
<i>Kiplinger's Personal Finance Magazine</i>	Yes	3 years	Broad categories	None	None	A to F for bull and bear markets	Rankings are assigned equally—20% in each grade
<i>Money</i>	Yes	5 years	Broad categories	None	None	A to E	Rankings are assigned equally—20% in each grade
<i>Morningstar</i>	Yes	3, 5, and 10 years	Combined equity and bond funds	None	Heavier weighting for longer periods	1 to 5 stars	Weightings determined by years of data available Star rankings assigned on a curve
<i>U.S. News and World Report</i>	Not directly	1, 3, 5, and 10 years	Similar funds	Fund expenses	Heavier weighting for shorter periods	0 to 100	Volatility is rated separately
<i>Wall Street Journal</i>	No	1, 3, 4, and 5 years	Similar funds	None	No	A to E	Rankings assigned equally—20% in each grade; separate ratings for each time period
<i>Worth</i>	No	3, 5, and 10 years	All funds	Expenses, fund size, turnover, manager tenure, etc.	Weightings change to emphasize short-, medium-, and long-term	1 to 10	Weightings change to rank funds for short-, medium-, and long-term investors

\* *Forbes* treated performance in a down market (the more negative the performance, the greater the risk) as an indication of risk but did not directly adjust for risk with a separate measure.